Replace the paragraph beginning at page 1, line 26, with the following rewritten paragraph:

--The amphibian peptide bombesin, pGlu-Gln-Arg-Leu-Gly-Asn-Gln-Trp-Ala-Val-Gly-His-Leu-Met-NH_2 (SEQ ID NO:1) (Anastasi et al., Experientia 27: 166-167 (1971)), is closely related to the mammalian gastrin-releasing peptides (GRP), e.g., the porcine GRP, H_2N-Ala-Pro-Val-Ser-Val-Gly-Gly-Gly-Thr-Val-Leu-Ala-Lys-Met-Tyr-Pro-Arg-Gly-Asn-His-Trp-Ala-Val-Gly-His-Leu-Met-(NH_2) (SEQ ID NO:2) (McDonald et al., Biochem. Biophys. Res. Commun. 90: 227-233 (1979)) and human GRP, H_2N-Val-Pro-Leu-Pro-Ala-Gly-Gly-Gly-Thr-Val-Leu-Thr-Lys-Met-Tyr-Pro-Arg-Gly-Asn-His-Trp-Ala-Val-Gly-His-Leu-Met (NH_2) (SEQ ID NO:3). Bombesin has been found to be a growth factor for a number of human cancer cell lines, including small-cell lung carcinoma (SCLC), and has been detected in human breast and prostate cancer (Haveman et al., eds. Recent Results in Cancer Research - Peptide Hormones in Lung Cancer, Springer-Verlag, New York: 1986). A number of these cancers are known to secrete peptide hormones related to GRP or bombesin. Consequently, antagonists to bombesin have been proposed as agents for the treatment of these cancers.--

Replace the paragraph beginning at page 13, line 3, with the following rewritten paragraph:

--Examples of preferred bombesin or GRP peptides are:

D-β-Nal-Gln-Trp-Ala-Val-Gly-His-LeuΨ[CH_2NH]Phe-NH_2,

D-Phe-Gln-Trp-Ala-Val-Gly-His-Leu-ethylamide,

p-Glu-Gln-Trp-Ala-Val-Gly-His-statine-amide (SEQ ID NO:4),

D-Phe-Gln-Trp-Ala-Val-Gly-His-LeuΨ[CH_2NH]-D-Phe-NH_2,

D-Cpa-Gln-Trp-Ala-Val-Gly-His-β-Leu-NH_2,

D-Cpa-Gln-Trp-Ala-Val-D-Ala-His-β-Leu-NH_2,

D-Cpa-Gln-Trp-Ala-Val-Gly-His-LeuΨ[CH_2NH]-Phe-NH_2.--

Replace the paragraph beginning at page 13, line 22, with the following rewritten paragraph:

--An example of a preferred GRF peptide of the invention is Tyr-Ala^2-Asp-Ala-Ile-Phe-Thr-Asn-SerΨ[CH_2NH]Tyr-Arg-Lys-Val-Leu-Gly-Gln-Leu-Ser-Ala-Arg-Lys-Leu-Leu-Gln-Asp-Ile-Met-Ser-Arg-NH_2 (SEQ ID NO:5); most preferably, the peptide contains, D-Ala, N-methyl-D-Ala, or alpha-aminobutyric acid in position 2. (Non-peptide bonds in which the peptide bond is reduced are symbolized herein by "Ψ[CH_2NH]" or "Ψ".)--

Replace the paragraph beginning at page 15, line 9, with the following rewritten paragraph:

--Fig. 2 is a series of amino acid sequences of naturally occurring peptides of which peptides of the invention are analogs (SEQ ID NOs:13-16, respectively).--

Replace the paragraph beginning at page 15, line 12, with the following rewritten paragraph:

--Figs. 3A ad 3B are a series of amino acid sequences of naturally occurring peptides of the VIP peptide family, of which GRF peptides of the invention are analogs (SEQ ID NOs:17-26, respectively).--

Replace the paragraph beginning at page 15, line 18, with the following rewritten paragraph:

--Fig. 6 is a graph showing the antagonism of GRF stimulated GH secretion by Ser$^9\Psi$[CH_2NH]Tyr^{10} GRF(1-29)NH_2 (SEQ ID NO:5). We now describe the structure, synthesis, and use of the preferred embodiments of the invention.--

Replace the paragraph beginning at page 16, line 17, with the following rewritten paragraph:

--The synthesis of the bombesin antagonist pGlu-Gln-Trp-Ala-Val-Gly-His-LeuΨ[CH_2NH]Leu-NH_2 (SEQ ID NO:7) follows. Other bombesin, GRP, or GRF antagonists can be prepared by making appropriate modifications of the following synthetic methods.--

Replace the paragraph beginning at page 16, line 22, with the following rewritten paragraph:

--The first step is the preparation of the intermediate pGlu-Gln-Trp-Ala-Val-Gly-His(benzyloxycarbonyl)-LeuΨ[CH_2NH]Leu-benzhydrylamine resin, as follows.--

Replace the paragraph beginning at page 18, line 14, with the following rewritten paragraph:

--The product is found to be homogeneous by HPLC and TLC. Amino acid analysis of an acid hydrolysate confirms the composition of the peptide. The presence of the LeuΨ[CH_2-NH]Leu bond is demonstrated by fast atom bombardment mass spectrometry. pGlu-Gln-Trp-Ala-Val-Gly-His-PheΨ[CH_2NH]Leu-NH_2 (SEQ ID NO:6) and pGlu-Gln-Trp-Ala-Val-Gly-His-LeuΨ[CH_2NH]Leu-NH_2 (SEQ ID NO:7) or other peptides are prepared in similar yields in an analogous fashion by appropriately modifying the above procedure.--

Replace the paragraph beginning at page 24, line 21, with the following rewritten paragraph:

--Solid-phase synthesis of the peptide BIM-26120, pGlu-Gln-Trp-Ala-Val-Gly-His-Sta-NH_2 (SEQ ID NO:4), was accomplished through the use of the following procedures in which alpha-t-butoxycarbonyl statine (prepared by the procedure of Rich et al., J. Org. Chem. 1978, 43, 3624) is first coupled to methylbenzhydrylamine-polystyrene resin. After acetylation, the intermediate p-Glu-Gln-Gln-Trp-Ala-Val-Gly-His(benzyloxycarbonyl)-Sta-

methylbenzhydrylamine (SEQ ID NO:9) resin is prepared. The synthetic procedure used for this preparation follows in detail:

1. Incorporation of alpha-t-butoxycarbonyl statine on methylbenzhydrylamine resin.--

Replace the paragraph beginning at page 30, line 27, with the following rewritten paragraph:

--Solid phase synthesis of $Ser^{9}\Psi[CH_2NH]Tyr^{10}$GRF(1-29), Tyr-Ala-Asp-Ala-Ile-Phe-Thr-Asn- Ser$\Psi[CH_2NH]$Tyr-Arg-Lys-Val-Leu-Gly-Gln-Leu-Ser-Ala-Arg-Lys-Leu-Leu-Gln-Asp-Ile-Met-Ser-Arg-NH_2 (SEQ ID NO:5), was carried out as follows.--

Replace the paragraph beginning at page 31, line 16, with the following rewritten paragraph:

--The resin bound peptide was elongated by repeating cycles (a-j) to give Boc-Tyr-Arg-Lys-Ala-Leu-Gly-Gln-Leu-Ser-Ala-Arg-Lys-Leu-Leu-Gln-Asp-Ile-Met-Ser-Arg-Gln-Gln-Gly-Glu-Ser-Asn-Gln-Glu-Arg-Gly-Ala-Arg-Ala-Arg-Leu-methylbenzhydrylamine (SEQ ID NO:10). The Boc group is then removed by TFA treatment. Boc-serine aldehyde (0.75 mmoles), prepared by the method of Fehrentz and Castro (1), is dissolved in 5 ml of dry DMF and added to the resin TFA salt suspension followed by the addition of 100 mg (2 mmoles) of sodium cyanoborohydride (2, 3). After stirring for 1 h, the resin mixture is found to be negative to ninhydrin reaction (1 min) indicating complete derivatization of the free amino group.--

Replace the paragraph beginning at page 40, line 14, with the following rewritten paragraph:

--Growth of NCI-H69 xenografts and the tumor growth inhibitory activity of the bombesin antagonist BIM-26100 (pGlu-Gln-Trp-Ala-Val-Gly-His-Phe$\Psi[CH_2NH]$Leu-NH_2 (SEQ ID NO:6)) are illustrated as tumor growth curves in Fig. 1, and relative tumor sizes in Table 2. Administration of BIM-26100 as a s.c. infusion around the tumor significantly inhibited tumor growth. The effectiveness of the antitumor activity of BIM-26100 is evident in view of the large inoculum of NCI-H69 tumor cells (i.e., the equivalent of 5 confluent 75 cm^2 cell culture

flasks per animal) and the agglomerated condition of the cells. In confluent flasks, NCI-H69 agglomerates are macroscopically visible and together resemble a metastatic tumor colony. Many such tumor colonies were implanted per animal. The dose of BIM-26100 was arbitrarily selected on the bases of compound availability and is not optimal. Higher doses of BIM-26100 may be administered, as indicated by body weight gain (minus tumor weight) gain during the course of treatment (Table 3). This suggest BIM-26100 completely lacks local or systemic toxicity and is useful therapeutically as an anti-growth factor with anti-tumor effects.--

Replace the paragraph beginning at page 41, line 13, with the following rewritten paragraph:

--The purified analogs were assayed in a 4-day primary culture of male rat anterior pituitary cells for growth hormone (GH) release, as described by Hocart et al. (1988, supra) and Murphy and Coy (1988, Peptide Research 1:36). Potential antagonists were retested in the presence of GRF(1-29)NH_2 (SEQ ID NO:11) (1 nM). The results are shown in Figs. 4-6, in which different dosages of the analogs were measured against GRF.--

Replace the paragraph beginning at page 41, line 21, with the following rewritten paragraph:

--The incorporation of the reduced peptide bond isostere in the N-terminal region of GRF(1-29)NH_2 (SEQ ID NO:11) produced very weak agonists and one antagonist with an IC_{50} of approximately 10μM.--

Replace the paragraph beginning at page 41, line 25, with the following rewritten paragraph:

--Placement of the pseudopeptide bond between the N-terminal 9^{th} and 10^{th} residues produced the analogue [$Ser^9\Psi[CH_2NH]Tyr^{10}$]-GRF(1-29)$NH_2$ (SEQ ID NO:5) (peptide VIII). This analog was found to be inactive in the potency assay, and was therefore tested for antagonist activity in the presence of a stimulating dose of GRF(1-29)NH_2 (SEQ ID NO:11) (1 nM). The results are shown graphically in Fig. 6. [$Ser^9\Psi[CH_2NH]Tyr^{10}$]-GRF(1-29)$NH_2$

(SEQ ID NO:5) was found to be an antagonist in the 10μM range vs 1 nM GRF. Earlier conventional structure-activity studies with the same peptide had elucidated a more potent antagonist, namely [N-Ac-Tyr^1, D-Arg^2]GRF(1-29)NH_2 (Robberecht et al., J. Endocrinology, 1985, 117, 1759). This analog had an IC_{50} of approximately 1μM in an assay for adenylate cyclase activity in rat anterior pituitary homogenates.--

Replace the table beginning at page 45, line 1, with the following rewritten table:

--Table 1

Code	Structure	3T3 GRP Receptor IC50(nM)	Thym. Uptake IC50(nM)
BIM-26092	Gly-Asn-His-Trp-Ala-Val-Gly-His-LeuΨ[CH_2NH]Leu-NH_2 (SEQ ID NO:12) Neuromedin C	242	466
BIM-26095	pGlu-Gln-Trp-Ala-Val-D-Ala-His-LeuΨ[CH_2NH]Leu-NH_2 Litorin	2623	1209
BIM-26100	pGlu-Gln-Trp-Ala-Val-Gly-His-PheΨ[CH_2NH]Leu-NH_2 (SEQ ID NO:6) Litorin	23	26
BIM-26101	pGlu-Gln-Trp-Ala-Val-Gly-His-LeuΨ[CH_2NH]Leu-NH_2 (SEQ ID NO:7) Litorin	118	296
BIM-26105	D-Ala-Asn-His-Trp-Ala-Val-D-Ala-His-LeuΨ[CH_2CH]Leu-NH_2 Neuromedin C	107	107
BIM-26106	desGly-D-Ala-His-Trp-Ala-Val-D-Ala-His-LeuΨ[CH_2CH]Leu-NH_2 Neuromedin C	401	354
BIM-26107	D-Phe-His-Trp-Ala-Val-Gly-His-LeuΨ[CH_2NH]Leu-NH_2 Neuromedin C	199	154